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EXAMINER

MACCHIAROLO, PETER J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Amendment

The reply filed on 01/12/2007 consists of changes to the claims, petition to revive, and further, the reply consists of remarks related to the prior rejection of claims in the previous Office Action. The petition has been granted on 06/06/2007. Therefore, the above have been entered and considered. However, pending claims 1-15 are not allowable as explained below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd.

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App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 4 recites “about 100kHz,” while claim 1 recites “greater than 100kHz” which is the narrower statement of the range limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over previously cited Juestel et al (PGPUB 20020027420; “Juestel”) in view of Miyazaki et al (USPN 6522084; “Miyazaki”).

Regarding claims 12 and 13, Juestel discloses in at least figure 1 a light fixture comprising a socket (not labeled) electrically connected to a power source (not shown); and a bulb comprising, a base portion (5) electrically connected to said socket (not labeled) and configured to receive electrical power from the power source, a ballast portion (see at least paragraph 40) electrically connected to said base (5) and configured to convert the electrical power to an AC waveform, a gas discharge tube configured to pass the AC waveform through a mixture of gases and emit UV light, and a glass envelope (2) surrounding said gas discharge tube, wherein a phosphor coating (4) is distributed on an inside surface of said glass envelope (2).

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Juestel is silent to the ballast being a high frequency ballast configured to convert the electrical power to a high frequency AC waveform having a frequency greater than 100 kHz to drive a gas discharge tube.

However, it is noted that the inclusion of a high frequency ballast is not shown to solve any problems or yield any unexpected results that are not within the scope of Juestel's lamp. Accordingly, the inclusion of a high frequency ballast is considered to be an obvious matter of design choice to suit the intended power needs and space requirements. For example, Miyazaki teaches in at least figure 1 and col. 4, ll. 12-25 that a ballast (4) for a compact fluorescent lamp can be a high frequency ballast which converts the waveform to about 40-500kHz, which reduces the copper loss while prevent undue thermal stress on the coil (see at least col. 6, ll. 27-39).

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the lamp of Juestel with a high frequency ballast to properly power the device and excite the phosphors while minimizing copper loss while prevent undue thermal stress on the coil.

Regarding claims 14 Juestel discloses the mixture of gasses includes argon (see at least paragraph 18).

Claims 1, 3, 4, 6-11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over previously cited Juestel in view of Miyazaki in further view of Kakisaka et al (USPGPUB 20020021093; "Kakisaka").

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Regarding claims 1 and 4, Juestel shows in figure 1, a gas discharge lamp, comprising: a base (5) configured to receive electrical power from a power source, a ballast (see at least paragraph 40) electrically connected to the base, a gas discharge tube (1) configured to receive the high frequency AC waveform and emit UV light by passing the a waveform through a mixture of gases contained within the gas discharge tube and to emit UV photons in response, and a visible light emitting surface having a glass envelope (2) of different geometry than the gas discharge tube and a phosphor coating (4) placed on the inside of the glass envelope, the glass envelope sealing a volume around the gas discharge tube.

Juestel is silent to the ballast being a high frequency ballast configured to convert the electrical power to a high frequency AC waveform for driving a gas discharge tube, or the gas discharge tube being at least partially evacuated.

However, partially evacuating the glass envelope is known to prevent the discharge tube from being excessively heated, as taught by Kakisaka in at least paragraph 42.

Furthermore, it is noted that the inclusion of a high frequency ballast is not shown to solve any problems or yield any unexpected results that are not within the scope of Juestel's lamp. Accordingly, the inclusion of a high frequency ballast is considered to be an obvious matter of design choice to suit the intended power needs and space requirements. For example, Miyazaki teaches in at least figure 1 and coo. 4, ll. 12-25 that a ballast (4) for a compact fluorescent lamp can be a high frequency ballast which converts the waveform to about 40-500kHz, which reduces the copper loss while prevent undue thermal stress on the coil (see at least col. 6, ll. 27-39).

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Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the lamp of Juestel with a high frequency ballast to properly power the device and excite the phosphors while minimizing copper loss while prevent undue thermal stress on the coil.

Regarding claim 3, Juestel shows that the base is a standard candelabra base [0040].

Regarding claim 6, Juestel discloses the gas discharge tube comprises UV transparent material [0039].

Regarding claim 7, Juestel discloses the mixture of gasses includes argon (see at least paragraph 18).

Regarding claim 8, Juestel shows in figure 1 the geometry of the gas discharge tube is cylindrical but may be a multiple-bent or coiled tube (see at least paragraph 22).

Regarding claim 9, Juestel discloses the phosphor coating on the inside of the glass envelope is configured to convert UV photons emitted by the gas discharge tube into visible light photons (see at least paragraph 26).

Regarding claim 10, Juestel discloses the glass envelope is configured to block UV photons that are not converted by the phosphor coating (see at least paragraph 27).

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Regarding claim 11, the Examiner notes that the limitation, “wherein the VLES is configured for use as a sign” is an intended use type limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding claim 15, Juestel is silent to the glass envelope being sealed and a partially evacuated.

However, as discussed above, partially evacuating the glass envelope is known to prevent the discharge tube from being excessively heated, as taught by Kakisaka in at least paragraph 42.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device taught by Juestel and Miyazaki by partially evacuating the interior volume to prevent the discharge tube from overheating.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Juestel, Kakisaka, and Miyazaki in view of previously cited Nishio et al (USPN 5828170; “Nishio”).

Regarding claim 2, Juestel and Miyazaki are silent to the use of a DC blocking capacitor which block DC current from the high frequency ballast from reaching the gas discharge tube.

However, it is noted that the inclusion of a DC blocking capacitor is not shown to solve any problems or yield any unexpected results that are not within the scope of Juestel and

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Miyazaki's lamp. Accordingly, the inclusion of a DC blocking capacitor is considered to be an obvious matter of design choice to suit the intended circuitry needs and operating parameters. For example, Nishio discloses that a DC blocking capacitor is typically used in a high frequency ballast.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the lamp of Juestel and Miyazaki with a DC blocking capacitor to meet certain operating parameters.

Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Juestel, Kakisaka and Miyazaki in view of Applicant's Admitted prior art.

Regarding claim 5, Juestel discloses that a coil of tungsten is used as an electrode in the gas discharge tube (see at least paragraph 2), which indicates that a hot or cold cathode type of electrode is used.

Although Juestel nor Miyazaki explicitly mention the type of cathode used, Applicant shows in the admitted prior art, figure 1, that a compact fluorescent gas discharge lamp is known to include electrodes for receiving the high frequency AC waveform from the gas discharge tube, the electrodes being one of a cold cathode and a hot cathode type. One would be motivated to use a hot or cold cathode type electrode since their electrifying properties are extremely predictable since they are both known in the art.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the lamp of Juestel and Miyazaki with a cold or hot type cathode.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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